NUMBER THEORY AND DIOPHANTINE ANALYSIS.

185. Proposed by R. D. CARMICHAEL, Bloomington, Ind.

Obtain the complete solution of the equatian $\phi(p^\alpha) = \phi(q^\beta)$ where ϕ denotes Euler's ϕ-function, p and q are unknown primes and α and β are unknown integers.

NOTES AND NEWS.

There has recently appeared from the publishers, Gauthier-Villars, a fine translation, by Paul Babarin, of Dr. Halsted's *Rational Geometry*. The book since its publication in English a few years ago, has been translated in German and Japanese, and now in French. In the preface of the French edition, C. A. Laisant says, among other things, that the book is clearly written, and the translation faithful and limpid, and he expresses the belief that the work is destined to exercise a profound effect upon the transformation of geometric teaching. F.

The reports of the American Committee of the International Commission on the Teaching of Mathematics, which are now being issued by the United States Bureau of Education, may be had upon application to the Commissioner of Education, Washington, D. C. Those who desire to receive these reports may thus not only get the half dozen already issued but may have their names entered so as to receive the remaining reports as fast as they are issued.

The final report of the International Commissioners is to be presented at the meeting of the International Congress of Mathematicians to be held in Cambridge, England, in August, 1912. S.

The annual resumé of doctorates conferred by American Universities, as printed in *Science* in the issue of August 18, 1911, should be of interest to readers of the MONTHLY.

It contains comparative tables showing the average number of doctorates in all subjects for each of 44 universities for the ten years, 1898-1907; the total number for the fourteen years, 1898-1911; the actual number for each of the years, 1908, 1909, 1910, 1911, together with the corresponding data for doctorates in the sciences including mathematics.

The universities which have conferred more than 100 doctorates during the last fourteen years are: Columbia 555, Chicago 545, Harvard 495, Yale 452, Johns Hopkins 411, Pennsylvania 341, Cornell 306, Wisconsin 152, Clark 137, and New York 123. Those showing an average of more than 10 during the ten years 1898-1907 are: Chicago 35.6, Harvard 33.8, Columbia 32.2, Yale 31.8, Johns Hopkins 30,5, Pennsylvania 22.5, and Cornell 18.1.